

IN THE CLAIMS:

Please amend the claims and cancel claims 1-10 and 20-22, without prejudice, as follows:

1-10. (Canceled)

11. (Currently Amended) ~~The method of claim 1, further comprising the step of A~~
method for culturing embryoid bodies from embryonic stem cells, comprising:

obtaining embryonic stem cells;

culturing the embryonic stem cells to induce formation of embryoid bodies;

isolating the embryoid bodies;

casting the embryoid bodies in a three-dimensional scaffolding material and a cell culture medium;

growing the embryoid bodies in the three-dimensional scaffolding material and cell culture medium; and

inducing differentiation of the embryoid bodies to produce fibroblasts after the growing step.

12. (Original) The method of claim 11, wherein the inducing step comprises adding a cytokine to the three-dimensional embryoid body culture.

13. (Original) The method of claim 12, wherein the cytokine is vascular endothelial growth factor (VEGF); vascular permeability factor (VPF); members of the fibroblast growth factor family (FGF); members of the interleukin family (IL-1 α , and -1 β , -2, -3, -4, -5, -6, -7, -8, -9, -10, -11, -12, -13, -14, -15, -16, -17 or -18); epidermal growth factor (EGF); platelet-derived growth factor (PDGF); platelet-derived endothelial cell growth factor (PD-ECGF); transforming growth factors alpha and beta (TGF- α , TGF- β); tumor necrosis factor alpha (TNF α); hepatocyte growth factor (HGF); granulocyte-macrophage colony stimulating factor (GM-CSF); insulin growth factor-1 (IGF-1); angiogenin; angiotropin; fibrin, nicotinamide; macrophage inflammatory protein (MIP);

macrophage migration inhibiting factor (MIF); granulocyte stimulating factor (GCSF); macrophage stimulating factor (MCSF); endothelial cell growth factor (ECGF); members of the interferon family (IFNs); members of the insulin-like growth factor family (IGF-I and IGF-II); nerve growth factor (NGF); members of the neurotrophin family (NTs); members of the selectin family; intercellular adhesion molecule (ICAM); platelet vascular cell adhesion molecule (PECAM); vascular cell adhesion molecule (VCAM); calcitonin, mediators, hormones or hirudin.

14. (Original) The method of claim 13, wherein the cytokine is transforming growth factor beta (TGF- β); fibroblast growth factor (FGF); or interleukin 4 (IL-4).

15. (Original) The method of claim 12, wherein the inducing step further comprises adding a cell culture medium comprising about 2% ES qualified fetal bovine serum.

16. (Original) The method of claim 11, further comprising the steps of;
-isolating the differentiated cells from the three-dimensional scaffolding material;
and
-culturing the differentiated cells in monolayer culture; after the inducing step.

17. (Original) The method of claim 16, wherein the isolating step is performed by digesting the three-dimensional scaffolding material and by centrifugation.

18. (Original) The method of claim 16, wherein the monolayer culture includes a culture medium of knock out DMEM and about 10% ES qualified fetal bovine serum.

19. (Original) The method of claim 12, wherein the inducing step includes adding FGF, TGF- β 1 or IL-4 to the medium.

20-22. (Canceled)